DOCUMENT RESUME

ED 182 003 PS 010 887

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TITLE Communication and Play Behaviors of a Deaf Preschooler and His Younger Sibling.
PUB DATE Mar 79
NOTE 11p.; Paper presented at the Biennial Meeting of the Society for Research in Child Development (San Francisco, CA, March 15-18, 1979)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Case Studies; *Communication Problems; Cooperation; *Deaf; *Interaction; Observation; *Play; *Preschool Children; Proximity; *Siblings

ABSTRACT

This study investigates communication and play behaviors of a deaf preschooler and his younger brother. Observations of four free play sessions suggests that to some extent the normal pattern of sibling interaction was altered. Videotape analysis of the play sessions revealed that a substantial number of the hearing child's communications were not perceived by his deaf sibling. The younger child did not repeat those attempts. Behaviors were coded for location, communication attempts, interactions, use of play materials, movement and several affiliative behaviors. Among the findings, manipulation of play materials fell within the normal range of dyadic interactions reported for preschoolers. Cooperation and proximity were maintained with each child equally likely to imitate the behavior of the other. Affiliative, proximity-seeking and contact-terminating behaviors were almost equally shared. Though normal for three- and four-year olds, the brothers' use and extent of communiction was minimal. Cooperative play depended on one child physically following the other. Interactions were initiated and maintained through proximal contacts and were focused on play material. No hostile aggression was observed. Communications not perceived resulted in reduced interaction (missed communication typically leads to a deaf child's increased isolation from the family), and this along with a dearth of symbolic communications may affect the social and cognitive development of both children. (Author/RH)

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Communication and Play Behaviors of a Deaf Preschooler and His Younger Sibling

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Paper presented at the Society for Research in Child Development, March, 1979

PS010887

Communication and play behaviors of a deaf preschooler and his younger sibling

The study to be presented today is an investigation of the communication and play behaviors of a deaf preschooler and his younger sibling. In order that you may more easily follow what I'm reporting I've elected to call the children in this pair David and Henry. At the time of our first observations David was four years old and had been profoundly deaf since birth. In the course of our study he produced no meaningful vocalizations. His deafness was accompanied by some congenital heart problems but on the whole, his physical development was normal. Henry was the three year old hearing brother of David.

Through our observations of a series of four free play sessions we tried to address the question of how the sibling interactions of two preschool boys might be altered by the deafness of the older child, aged four. Our analyses suggested that to some extent the normal pattern of sibling interaction had been affected. The rather limited data for preschoolers' interactions and sibling interactions provided some indication of whether the interactions of this pair departed from those of normal hearing pairs. Our analysis of the videotapes of these play sessions most dramatically differed from "normal" interactions in that a substantial number of the younger, hearing child's communications were not perceived by his deaf sibling. More importantly, the younger child did not repeat his communication attempts when this occurred.

Our observations of the two children took place after David's

regularly scheduled weekly visit to the Speech and Hearing Clinic. David's therapy consisted of signed and spoken English. Henry regularly accompanied David to the clinic, although he was not included in the therapy sessions.

We were interested in making these observations so that we could compare what we saw with the growing body of research which demonstrates that the young child recognizes and is affected by the other individuals with whom he interacts (Lougee, et al., 1977)--particularly as these effects are demonstrated in peer interactions. Hartup (1978) argues that peer interaction is necessary for the cognitive, social and moral development of the child. In the case of young children, peer interaction is often restricted by the parents (Lewis, 1975); therefore, it is the sibling who becomes the major source of "peer" interaction. The function of sibling interaction for development is especially important in the study of the handicapped child since this is often his only source of "peer" interaction. This seems to be the case in the sibling relationship of David and Henry--and is probably typical of the circumstances of many deaf children.

Our observations occurred in a playroom where the boys waited for their mother to join them following David's weekly appointments. This was a relatively ordinary playroom; it was approximately 15 by 20 feet. The spatially distinct areas of the playroom included a large semi-circular table and a small rectangular table--both with chairs, a sink at child-height with supply cabinets below it, a wooden toybox, metal cabinets, a blackboard and two doors. In short, the room provided sufficient variety and space to allow us to observe

the children as they moved about the room, investigated what it had to offer and made contact with one another.

Behaviors were coded for location, communication attempts, interactions, use of play materials, movement and several affiliative behaviors. Communications included such activities as eye contact, attention getting, pointing, touching, signing, meaningful and non-meaningful vocalizations, gestures and inattention.

In the manipulation of play materials, most activities fell within the normal range of dyadic interactions reported for pre-schoolers. Cooperation and proximity were maintained through use of gestures, signals and modeling--with each child equally likely to imitate the behavior of the other. This particular finding may be at variance with Lamb's (1978) observations of nonhandicapped sibling interactions. The older siblings in his study ranged from 38 to 70 months, while the younger siblings were 18 months. Henry and David were 38 and 50 months, respectively. Lamb's data suggests that younger children are more likely to monitor and imitate the behaviors of older children--whereas the "balance of power" in our sibling dyad appears to be evenly distributed.

Not only did each child engage in following the activities of the other about evenly--but they also shared the responsibility for affiliative and proximity-seeking behaviors about equally. We calculated that David's activities followed Henry's about 46% of the time and that it was David who sought contact with Henry 52% of the time. These figures indicate that there is very little difference in the extent to which David and Henry are engaging in following one another and seeking contact. Once again, these observations differ

from Lamb's finding that younger sibling took responsibility for maintaining proximity within the dyad.

It was also interesting to find that contact was likely to be broken by either child. In our observations David moved out of proximity of Henry; that is, the older child moved out of proximity of the younger child, 48% of the time. This lack of any identifiable dominance in the sibling relationship suggests that the two children may be at the same developmental level--at least in terms of the play activities we observed.

The communication and affiliative behaviors we documented accounted for a small percentage of each child's activities. For David--the older, deaf child--they accounted for 17% of his activity. For Henry--the younger, hearing child--they accounted for 14% of his activity. About a quarter of the deaf child's communication and affiliative behaviors depended on signing, pointing or gesturing. Although the boys sometimes engaged in cooperative activities these were rather straightforward and usually involved something like handing a block to the other child to put it on the table or gesturing to "throw" the ball. Although David and Henry's play resembled the normal range of activities for a three and a four year old--their use and extent of communications was minimal.

Cooperative play frequently relied on one child's physically following the other in some activity or change in activity. What's meant here by "physical following" is that the behavior of one child was picked up by the other. When we evaluated the extent of visual and physical following we found that physical following was more often engaged in by both boys. David, however, used visual following

to "keep in touch" with Henry slightly more often than Henry did--though it accounted for less than 4% of our observations of David. Interactions were initiated and maintained through proximal contact, rather than distal contact.

The majority of contacts that David and Henry had with one another were focused on some play material. As a matter of fact (and possibly of some interest) the only aggressive interactions we saw involved instrumental aggression. For example, Henry did on several occasions push David from the doorway in order to look into the room next door. And David did occasionally grab some object from Henry so that he could investigate it or play with it, too. These aggressive interactions accounted for a very small percentage of the activities of the two children--less than 2% in each case. We failed to observe any hostile aggression at all.

As I mentioned, communication relied largely on physical contact, signs and gestures. There was almost no symbolic communication--objects were touched or pointed out; activities were represented in abbreviated movements. Henry did once sign "Mommy" after he had called out for her, but most of the communications referred to the activity of the moment. Both boys engaged in communication attempts to the same degree, but 17% of the hearing child's communications were not perceived by the deaf child. When this happened, Henry never followed up with a second communication attempt. For example, when Henry tried to hand a toy to David who was standing next to him but David's attention was elsewhere--Henry then carried the toy to another part of the room. Or when Henry signed "more" to his brother, indicating that he wanted more clay and David was

inattentive--Henry returned his attention to his clay.

It is important to recognize that these incidents represent attempts to communicate where communication does not occur because of the failure of the hearing child to gain the attention of his brother. This departure from normal play interactions is a direct result of the older child's low level of communicative competence. Further, the younger child's single communication attempts indicate that his behavior toward his brother may already have been shaped by this aspect of their interaction.

There are two kinds of effect which may mean an increasing departure from normal sibling interaction for David and Henry--one related to these aborted communications and the other to the rather meager communications which are exchanged. First, the deaf child's social development might be expected to suffer as symbolic communications for the hearing child increased. Without intervention David could be expected to be more and more left out of peer and family interactions. Second, the deaf child's role as stimulant to the younger child's cognitive development might be expected to be minimal. Cicirelli (1974) found that behaviors of older siblings such as giving explanations and category names fostered use of inferential categories on the part of their younger siblings. Cicirelli's work pointed out one way in which sibling interaction has a role in cognitive development, at least for the younger sibling in the pair. Clearly, David is not providing explanations or category names for Henry. Therefore, concept facilitation or other related cognitive gains are unlikely to occur through David's interactions with Henry now or in the future.

Some intervention might allow for more verbal communication attempts and increased symbolic communication. Intervention directed toward both hearing and deaf children within the family might focus on more effective strategies for sending and transmitting communications. There is a need for powerful models--with parents being the most likely candidates. Parents might demonstrate that repeated communications attempts are necessary when the original attempt is met with inattention; they might also demonstrate a variety of behaviors directed at communicating with the deaf child.

Some of the differences observed in the interactions of these two siblings may be atypical not because of David's deafness but because of the small age difference between the two brothers and because of some developmental delay on the part of the older, deaf brother (e.g., the deaf child had not developed the motor coordination typical of other children of his age). We need to increase the number of observations of preschool deaf and hearing sibling pairs. Longitudinal observations of this particular pair might indicate development of future communication and play behaviors. Even without this additional data, it is still important, however, to direct attention to the number of interactions which did not occur because of David's failure to perceive some communication on the part of Henry. It is important because this represents a typical case where the deaf child misses a communication initiated by his sibling or some other family member--and his isolation from the family increases. The deafness of the older child in this pair has led to some alteration of the normal interactions of preschool siblings, particularly in the dearth of communications exchanged at the symbolic

level. The long-term effects of this alteration may be expected to influence both the social and the cognitive development of the deaf child--and to some extent the social and cognitive development of the hearing child as well.

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